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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,193	07/10/2001	John A. Samuels	090472D1	8407

23696 7590 08/03/2009
QUALCOMM INCORPORATED
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SAN DIEGO, CA 92121

EXAMINER

ADDY, THUAN KNOWLIN

ART UNIT	PAPER NUMBER
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2614

NOTIFICATION DATE	DELIVERY MODE
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08/03/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/902,193	Applicant(s) SAMUELS, JOHN A.	
	Examiner THJUAN K. ADDY	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on May 04, 2009 has been entered. No claims have been amended. Claims 1-25 have been cancelled. No claims have been added. Claims 26-61 are still pending in this application, with claims 26 and 40 being independent.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 26-50 and 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (US Patent Application, Pub. No.: US 2003/0060195 A1), in view of Bronner (US 5,873,046).
4. In regards to claims 26, 40, and 58, Dent discloses a dual mode receiver and transmitter (e.g., dual mode telephone/phone, See Fig. 1) operable to receive signals in a first mode (See Fig. 2 and GSM mode) having an associated first channel spacing, and to receive signals in a second mode (See Fig. 2 and satellite mode) having an associated second channel spacing smaller than the first channel spacing (See pg. 3, paragraph [0030] – [0031]), comprising: first and second front-end RF stages for receiving a signal transmitted in the first mode at a first carrier frequency and the second mode at a second carrier frequency different from the first carrier frequency,

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respectively (See pg. 2 , paragraph [0022]; pg. 2-3, paragraph [0027]; and pg. 3, paragraph [0036]). Dent, however, does not specifically disclose further circuitry, the further circuitry being operable to receive an intermediate frequency (IF) common to each mode of operation and to supply a further signal to further RF circuitry. Bronner, however, does disclose further circuitry (See Fig. 3 and integrated dual-mode intermediate-frequency (IF) amplifier 330), the further circuitry being operable to receive an intermediate frequency (IF) common to each mode (e.g., analog mode and digital mode) of operation and to supply a further signal to further RF circuitry (See col. 1 lines 6-10, col. 2 lines 25-30, and col. 6 lines 39-58). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the limitation within the receiver, as a way of integrating the functions of the conventional dual IF-amplifier chains into a single dual-mode amplifier chain capable of operating in both digital and analog modes.

5. In regards to claims 27 and 41, Dent discloses a receiver and transmitter, comprising two frequency down-conversion stages (See pg. 1, paragraph [0011] and pg. 4, paragraph [0046]).

6. In regards to claims 28, 32, 37, 42, 45, 49, and 59, Dent discloses a receiver and transmitter, wherein a synthesizer (See Fig. 3 and synthesizer 400) associated with one frequency down-conversion stage has a frequency resolution equal to the channel spacing associated with the received signal (See pg. 1, paragraph [0011] and pg. 4, paragraph [0046]).

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7. In regards to claims 29, 33, 38, 43, 46, and 50, Dent discloses a receiver and transmitter, wherein a synthesizer (See Fig. 2, synthesizer 34 and Fig. 3, synthesizer 400) associated with another frequency down-conversion stage has a frequency resolution wider than the channel spacing associated with the received signal (See pg. 3, paragraph [0030] – [0031] and pg. 4, paragraph [0046] – [0047]).

8. In regards to claim 30, Dent discloses all of claim 30 limitations, except a receiver, operable to convert signals received in the first mode and the second mode directly to a common intermediate frequency. Bronner, however, does disclose a receiver (See Fig. 3 and dual-mode mobile-station receiver 300), operable to convert signals received in the first mode (e.g., analog mode or digital mode) and the second mode (e.g., analog mode or digital mode) directly to a common intermediate frequency (See col. 2 lines 25-30, and col. 6 lines 39-58).

9. In regards to claims 31, 35, 36, 44, 48, 60, and 61, Dent discloses a receiver and transmitter, further comprising: a first antenna (See Fig. 1 and 900 MHz Antenna) for receiving a first signal in the first mode (e.g., GSM mode); a filter (See Fig. 2, IF filter/amplifier 54 and low-pass filter {47}) associated with the first antenna for selecting signals lying in a predetermined first frequency band; a first mixer (See Fig. 2 and VCO 40) for mixing the received first signal with a first local oscillator signal; a second antenna (See Fig. 1 and 1525-1660 MHz Antenna) for receiving a second signal in the second mode (e.g., satellite mode); a filter (See Fig. 2, IF filter/amplifier 55 and low-pass filter {LPF} 46) associated with the second antenna for selecting signals lying in a predetermined second frequency band; a second mixer (See Fig. 2 and VCO 41) for

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mixing the received second signal with a second local oscillator signal; a switch (See Fig. 3 and transmit/receive switch 107) for selecting between signals received in the first mode and the second mode having as an output, the output of the first mixer or the second mixer; and a third mixer (See Fig. 2 and mixer 42) for mixing the output of the switch with a third local oscillator signal to produce a signal suitable for base band processing (See pg. 3, paragraph [0030] – [0031]).

10. In regards to claims 34, 39, and 47, Dent discloses a receiver and transmitter, wherein the first local oscillator signal is produced by a combined output of the first and the second synthesizers (See pg. 3, paragraph [0030] – [0031] and pg. 4, paragraph [0046] – [0047]).

11. Dent discloses all of claim 56 limitations, except a receiver or transmitter, wherein the first channel spacing is 200 KHz. Dent, however, discloses a receiver or transmitter, wherein the first channel spacing is 6MHz (See pg. 3, paragraph [0038]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to use 200 KHz as the first channel spacing, as a way of providing a first channel spacing that is wider than the second channel spacing.

12. Dent discloses all of claim 57 limitations, except a receiver or transmitter, wherein the second channel spacing is 41.67 KHz or 25 KHz. Dent, however, discloses a receiver or transmitter, wherein the second channel spacing is 450 KHz (See pg. 3, paragraph [0038]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to use 41.67 KHz or 25 KHz as the second channel

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spacing, as a way of providing a second channel spacing that is smaller than the first channel spacing.

13. Claims 51-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (US Patent Application, Pub. No.: US 2003/0060195 A1), in view of Bronner (US 5,873,046), and further in view of Ramesh et al (US 5,943,324).

14. Dent and Bronner disclose all of claim 51 limitations, except a receiver or transmitter, operable with a terrestrial cellular communication system in the first mode. Ramesh, however, discloses a receiver or transmitter (See Fig. 2, Fig. 4, Fig. 6, dish antenna 215, antenna 400, and receiver 610), operable with a terrestrial cellular communication system (See Fig. 2 and terrestrial cellular network 100) in the first mode (See col. 4 lines 21-42). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to make the receiver or transmitter operable with a terrestrial cellular communication system in the first mode, as a way of allowing the receiver or transmitter to be able to operate within a cellular communication system.

15. Dent and Bronner disclose all of claim 52 limitations, except a receiver or transmitter, operable with a satellite communication system in the second mode. Ramesh, however, discloses a receiver or transmitter, operable with a satellite communication system in the second mode (See col. 2-3 lines 63-15, col. 5 lines 16-31, and col. 5-6 lines 54-12).

16. Dent and Bronner disclose all of claim 53 limitations, except a receiver or transmitter, wherein the terrestrial cellular communication system is GSM. Ramesh,

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however, discloses a receiver or transmitter, wherein the terrestrial cellular communication system is GSM (See col. 5 lines 16-31 and col. 8-9 lines 52-1).

17. Dent and Bronner disclose all of claim 54 limitations, except a receiver or transmitter, wherein the satellite system is IRIDIUM. Ramesh, however, discloses a receiver or transmitter, wherein the satellite system is ICO (See col. 2 lines 16-22 and col. 4 lines 22-22), therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention, to use IRIDIUM as the satellite system.

18. Dent and Bronner disclose all of claim 55 limitations, except a receiver or transmitter, wherein the satellite system is ICO. Ramesh, however, discloses a receiver or transmitter, wherein the satellite system is ICO (See col. 2 lines 16-22 and col. 4 lines 22-22).

Response to Arguments

19. Applicant's arguments filed 05/04/2009 have been fully considered but they are not persuasive.

20. In response to Applicant's argument that neither Dent nor Bronner, either individually or in any proper combination, teach or suggest independent claims 26, 40, and 58 limitations "further circuitry being operable to receive an intermediate frequency (IF) common to each mode of operation and to supply a further signal to further RF circuitry" (Applicant's independent claims 26 and 58) and "further circuitry being operable to receive an intermediate frequency (IF) common to each mode of operation and to supply a further signal to the first and the second terminal RF stages"

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(Applicant's independent claim 40), Examiner respectfully disagrees. Examiner would first like to point out to Applicant that claim 58, as currently written, is not an independent claim, but rather is dependent upon claim 26. Furthermore, Dent discloses a dual mode receiver and transmitter (e.g., dual mode telephone/phone, See Fig. 1) ... comprising: first and second front-end RF stages for receiving a signal transmitted in the first mode (See Fig. 2 and GSM mode) at a first carrier frequency and the second mode (See Fig. 2 and satellite mode) at a second carrier frequency different from the first carrier frequency, respectively (See pg. 2 , paragraph [0022]; pg. 2-3, paragraph [0027]; and pg. 3, paragraph [0036]). Bronner discloses further circuitry (See Fig. 3 and integrated dual-mode intermediate-frequency (IF) amplifier 330), the further circuitry being operable to receive an intermediate frequency (IF) common to each mode (e.g., analog mode and digital mode) of operation and to supply a further signal to further RF circuitry (See col. 1 lines 6-10, col. 2 lines 25-30, and col. 6 lines 39-58). Therefore, Dent and Bronner, in proper combination, do teach and suggest the limitations of independent claims 26 and 40.

21. In response to Applicant's argument that in contrast, the alleged "modes" relied upon in the Office Action as taught by Bronner are clearly based on "modulation schemes" and not Applicant's claimed "carrier frequenc[ies]", Examiner respectfully disagrees. The analog mode and digital mode, of Bronner, are within a dual-mode mobile-station receiver 300, which uses two separate and different carrier frequencies (See col. 6 lines 39-58).

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

23. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THJUAN K. ADDY whose telephone number is (571)272-7486. The examiner can normally be reached on Mon-Fri 8:30-5:00pm.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thjuan K. Addy/
Primary Examiner, Art Unit 2614